

AMENDMENTS TO THE CLAIMS

Claims 9, 26, 27, 58, and 59 are canceled.

No claims are added.

- 5 Claims 1-5, 8, 10, 11, 21-25, 28, 29, 31-34, 36-38, 42, 48, 50-52, 54-57, 60-65, 70-73, and 77-79 are amended.

Accordingly, claims 1-8, 10-25, 28-57, and 60-81 are pending.

1. (Currently amended) A method of encoding a high-resolution
10 source image having a first aspect ratio, the method comprising:

generating a base layer representing a low-resolution portion of the source image, wherein the base layer has ~~an associated~~ the first aspect ratio; and

- 15 generating an enhancement layer representing a high-resolution portion of the source image, wherein the enhancement layer has ~~an associated a~~ second aspect ratio, and wherein the second aspect ratio ~~associated with the enhancement layer differs from the first aspect ratio associated with the base layer~~.

- 20 2. (Currently amended) A method as recited in claim 1 wherein the first aspect ratio ~~associated with the base layer~~ corresponds to an aspect ratio associated with low-resolution televisions.

3. (Currently amended) A method as recited in claim 1 wherein the second aspect ratio associated with the enhancement layer corresponds to an aspect ratio associated with high-resolution televisions.

5 4. (Currently amended) A method as recited in claim 1 wherein the first aspect ratio associated with the base layer is 4:3.

5. (Currently amended) A method as recited in claim 1 wherein the second aspect ratio associated with the enhancement layer is 16:9.

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6. (Original) A method as recited in claim 1 wherein the step of generating a base layer includes low-pass filtering the source image.

7. (Original) A method as recited in claim 1 wherein the step of
15 generating an enhancement layer includes subtracting a portion of the base layer from a corresponding portion of the source image.

8. (Currently amended) A method as recited in claim 1 wherein the step of generating an enhancement layer ~~includes~~comprises:

determining an offset value;

extracting a first image from the base layer based on the offset value,

5 wherein the aspect ratio of the first image has the second ~~differs from the aspect ratio of the base layer,~~ and wherein the first image is less than the entire image represented by the base layer;

extracting a second image from the source image based on the offset value, wherein the aspect ratio of the second image matches ~~also has the~~ second aspect ratio of the first image, and wherein the second image is less
10 than the entire image represented by the source image; and

subtracting the first image from the second image.

9. (Cancelled)

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10. (Currently amended) A method as recited in claim 8 ~~further including determining a vertical offset value, wherein the vertical offset value indicates the~~ a vertical location from which the first image is extracted from the base layer.

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11. (Currently amended) A method as recited in claim 8 ~~further including determining a horizontal offset value~~, wherein the horizontal offset value indicates ~~the~~ a horizontal location from which the first image is extracted from the base layer.

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12. (Original) A method as recited in claim 1 wherein the step of generating an enhancement layer includes high-pass filtering the source image.

13. (Original) A method as recited in claim 1 further including
10 combining the base layer and the enhancement layer into a single transport stream.

14. (Original) A method as recited in claim 1 further including
transmitting the base layer and the enhancement layer to an image decoding
15 system.

15. (Original) A method as recited in claim 1 further including
transmitting only the base layer to an image decoding system.

20 16. (Original) A method as recited in claim 1 further including
transmitting the base layer to an image decoding system using a first
transmission medium and transmitting the enhancement layer to the image
decoding system using a second transmission medium.

17. (Original) A method as recited in claim 1 further including transmitting the base layer to an image decoding system using a first transmission format and transmitting the enhancement layer to the image decoding system using a second transmission format.

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18. (Original) A method as recited in claim 1 further including storing the base layer and the enhancement layer on a storage medium.

19. (Original) A method as recited in claim 1 further including storing
10 the base layer on a first storage medium and storing the enhancement layer on a second storage medium.

20. (Original) One or more computer-readable memories containing a computer program that is executable by a processor to perform the method
15 recited in claim 1.

21. (Currently amended) A method comprising:

decoding a first-base layer representing a low-resolution portion of an encoded source image, wherein the first-base layer and the source image have a first ~~has an associated~~ aspect ratio; and

5 decoding a ~~second~~ an enhancement layer representing a high-resolution portion of the encoded source image, wherein the second layer has an ~~associated~~ a second aspect ratio, and wherein the second aspect ratio ~~associated with the second layer differs from the first aspect ratio associated with the first layer.~~

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22. (Currently amended) A method as recited in claim 21 wherein the aspect ratio associated with the first-base layer corresponds to an aspect ratio associated with low-resolution televisions.

15 23. (Currently amended) A method as recited in claim 21 wherein the aspect ratio associated with the ~~second~~ enhancement layer corresponds to an aspect ratio associated with high-resolution televisions.

20 24. (Currently amended) A method as recited in claim 21 wherein the aspect ratio associated with the first-base layer is 4:3.

25. (Currently amended) A method as recited in claim 21 wherein the aspect ratio associated with the ~~second~~ enhancement layer is 16:9.

26-27. (Cancelled)

28. (Currently amended) A method as recited in claim 21 further including communicating the first-base layer to a low-resolution television.

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29. (Currently amended) A method as recited in claim 21 further including combining the ~~second-enhancement~~ layer and a portion of the first base layer to generate high-resolution image data.

10 30. (Original) A method as recited in claim 21 wherein the method is executed by a television.

15 31. (Currently amended) A method as recited in claim 21 wherein the first-base layer is decoded from a physical medium and the ~~second enhancement~~ layer is decoded from a received data stream.

32. (Currently amended) A method as recited in claim 21 further including correcting an anamorphic squeeze in the first-base layer.

20 33. (Currently amended) A method as recited in claim 21 wherein the first-base layer is received at a first time and the ~~second-enhancement~~ layer is received at a second time.

34. (Currently amended) A method as recited in claim 21 wherein the ~~first-base~~ layer is received from a first media and the ~~second-enhancement~~ layer is received from a second media.

5 35. (Original) One or more computer-readable memories containing a computer program that is executable by a processor to perform the method recited in claim 21.

36. (Currently amended) A method comprising:
10 transmitting a base layer representing a low-resolution portion of an image, wherein the base layer and the image have a first ~~has an associated~~ aspect ratio; and

transmitting an enhancement layer representing a high-resolution portion of the image, wherein the enhancement layer has ~~an associated~~ a second aspect ratio, and wherein the second aspect ratio ~~associated with the~~ enhancement layer differs from the first aspect ratio ~~associated with the base~~ layer.

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37. (Currently amended) A method as recited in claim 36 wherein the first aspect ratio ~~associated with the base layer~~ corresponds to an aspect ratio associated with low-resolution televisions.

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38. (Currently amended) A method as recited in claim 36 wherein the second aspect ratio associated with the enhancement layer corresponds to an aspect ratio associated with high-resolution televisions.

5 39. (Original) A method as recited in claim 36 wherein the base layer is transmitted using a first transmission medium and the enhancement layer is transmitted using a second transmission medium.

40. (Original) A method as recited in claim 36 wherein the base layer
10 is transmitted using a first transmission format and the enhancement layer is transmitted using a second transmission format.

41. (Original) One or more computer-readable memories containing a computer program that is executable by a processor to perform the method
15 recited in claim 36.

42. (Currently amended) An apparatus comprising:

a base layer generator to generate a base layer having a first aspect ratio, wherein the base layer represents a low-resolution portion of an image, and wherein the image also has the first aspect ratio; and

5 an enhancement layer generator coupled to the base layer generator to generate an enhancement layer having a second aspect ratio, wherein the enhancement layer represents a high-resolution portion of the image, and wherein the first aspect ratio differs from the second aspect ratio.

10 43. (Original) An apparatus as recited in claim 42 wherein the base layer generator is a low-pass filter.

44. (Original) An apparatus as recited in claim 42 wherein the enhancement layer generator is a high-pass filter.

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45. (Original) An apparatus as recited in claim 42 wherein the enhancement layer generator includes an image extractor to extract a portion of the base layer and a differencing module to subtract the extracted portion of the base layer from a corresponding portion of the image.

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46. (Original) An apparatus as recited in claim 42 further including a transmitter coupled to the base layer generator and the enhancement layer generator, wherein the transmitter combines the base layer and the enhancement layer into a single transport stream.

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47. (Original) An apparatus as recited in claim 42 further including a transmitter coupled to the base layer generator and the enhancement layer generator, wherein the transmitter transmits the base layer and the enhancement layer to an image decoding system.

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48. (Currently amended) An apparatus as recited in claim 42 further including a transmitter coupled to the base layer generator, wherein the transmitter ~~that~~ transmits only the base layer to an image decoding system.

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49. (Original) An apparatus as recited in claim 42 further including a storage medium coupled to the base layer generator and the enhancement layer generator, wherein the storage medium stores the base layer and the enhancement layer.

50. (Currently amended) An apparatus comprising:

a base layer decoder to decode a base layer representing a low-resolution portion of an image, wherein the base layer and the image have a first ~~has an associated aspect ratio~~; and

5 an enhancement layer decoder coupled to the base layer decoder to decode an enhancement layer representing a high-resolution portion of ~~an the~~ image, wherein the enhancement layer has ~~an associated~~ a second aspect ratio that differs from the first ~~aspect ratio associated with the base layer~~.

10 51. (Currently amended) An apparatus as recited in claim 50 wherein the first ~~aspect ratio associated with the base layer~~ corresponds to an aspect ratio associated with low-resolution televisions.

52. (Currently amended) An apparatus as recited in claim 50 wherein
15 the second ~~aspect ratio associated with the enhancement layer~~ corresponds to an aspect ratio associated with high-resolution televisions.

53. (Original) An apparatus as recited in claim 50 wherein the apparatus is a television.

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54. (Currently amended) An apparatus as recited in claim 50 further including a receiver coupled to the base layer decoder and the enhancement layer decoder, wherein the receiver is to receive a transport stream containing a the base layer and an the enhancement layer.

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55. (Currently amended) One or more computer-readable media having stored thereon a computer program comprising the following steps:

generating a first-base layer representing a low-resolution portion of a source image, wherein the first-base layer and the source image have a first

10 has an associated aspect ratio; and

generating a second an enhancement layer representing a high-resolution portion of the source image, wherein the second enhancement layer has a second an associated aspect ratio, and wherein the second aspect ratio associated with the second layer is different from the first aspect ratio

15 associated with the first layer.

56. (Currently amended) One or more computer-readable media as recited in claim 55 wherein the first aspect ratio associated with the first layer is 4:3.

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57. (Currently amended) One or more computer-readable media as recited in claim 55 wherein the second aspect ratio associated with the second layer is 16:9.

58-59. (Cancelled)

60. (Currently amended) One or more computer-readable media as recited in claim 55 wherein the step of generating an enhancement-second
5 layer includes comparing a portion of the first-base layer with a corresponding portion of the source image.

61. (Currently amended) One or more computer-readable media as recited in claim 55 further including transmitting the first-base layer and the
10 second-enhancement layer to an image decoding system.

62. (Currently amended) One or more computer-readable media as recited in claim 55 further including transmitting only the first-base layer to an image decoding system.

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63. (Currently amended) One or more computer-readable media as recited in claim 55 further including storing the first-base layer on a storage medium.

20 64. (Currently amended) One or more computer-readable media as recited in claim 55 further including storing the second-enhancement layer on a storage medium.

65. (Currently amended) One or more computer-readable media having stored thereon a computer program comprising the following steps:

decoding a base layer representing a low-resolution portion of an encoded source image, wherein the base layer and the source image have ~~has~~

5 a first aspect ratio; and

decoding an enhancement layer representing a high-resolution portion of the encoded source image, wherein the enhancement layer has a second aspect ratio, and wherein the first aspect ratio is different from the second aspect ratio.

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66. (Original) One or more computer-readable media as recited in claim 65 wherein the first aspect ratio is 4:3.

67. (Original) One or more computer-readable media as recited in
15 claim 65 wherein the second aspect ratio is 16:9.

68. (Original) One or more computer-readable media as recited in claim 65 further including communicating the base layer to a low-resolution television.

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69. (Original) One or more computer-readable media as recited in claim 65 further including communicating the base layer and the enhancement layer to a high-resolution television.

70. (Currently amended) A method of encoding a source image having a first aspect ratio, the method comprising:

generating a base layer representing a low-resolution portion of the source image, wherein the base layer has an ~~associated~~ the first aspect ratio;

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generating an enhancement layer representing a high-resolution portion of the source image, wherein the enhancement layer has an ~~associated~~ second aspect ratio, wherein the second aspect ratio ~~associated with the enhancement layer differs from the first aspect ratio associated with the base~~
10 layer, and wherein both the base layer and the enhancement layer are used to generate a high-resolution image.

71. (Currently amended) A method as recited in claim 70 wherein the first aspect ratio ~~associated with the base layer~~ corresponds to an aspect ratio
15 associated with low-resolution televisions.

72. (Currently amended) A method as recited in claim 70 wherein the second aspect ratio ~~associated with the enhancement layer~~ corresponds to an aspect ratio associated with high-resolution televisions.

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73. (Currently amended) A method comprising:

decoding a first layer representing a low-resolution portion of an encoded source image, wherein the first layer and the source image have ~~has an~~ associated first aspect ratio;

5 decoding a second layer representing a high-resolution portion of the encoded source image, wherein the second layer has an associated second aspect ratio, and wherein the second aspect ratio differs from the first aspect ratio; and

10 combining the second layer and the first layer to generate high-resolution image data.

74. (Previously presented) A method as recited in claim 73 further comprising communicating the first layer to a low-resolution television.

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75. (Previously presented) A method as recited in claim 73 further comprising communicating the high-resolution image data to a high-resolution television.

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76. (Previously presented) A method as recited in claim 1 wherein both the base layer and the enhancement layer are used to generate a high-resolution image.

77. (Currently amended) A method as recited in claim 1 wherein the enhancement layer contains only ~~the~~ a high-resolution portion of the source image.

5 78. (Currently amended) A method as recited in claim 21 wherein both the ~~first~~ base layer and the ~~second~~ enhancement layer are used to generate high-resolution image data.

79. (Currently amended) A method as recited in claim 21 wherein the
10 ~~second~~ enhancement layer contains only high-resolution image data.

80. (Previously presented) A method as recited in claim 36 wherein both the base layer and the enhancement layer are used to generate high-resolution image data.

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81. (Previously presented) A method as recited in claim 50 wherein both the base layer and the enhancement layer are used to generate high-resolution image data.

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